

DETAILED ACTION

1. In view of the Appeal Brief filed on 10/727,139, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Response to Arguments

2. Applicant's arguments, see pages 6-9, filed 4/25/08, with respect to the rejection(s) of claim(s) 1 and 12 under 35 USC

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103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Maiolani et al. in view of Abbondanzio.

3. The Examiner does rely on prior art cited in the previous action in this action for some of the dependent claims because these rejections were not specifically traversed in the Appellant's Brief. The Claims that were argued, have new prior art rejections applied thereto.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Referring to claim 1, the claim recites a "plurality of cards", then "each card", then "another card," and then,

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a respective card." At the end of the claim, "the card" is made reference to, however it is unclear to the Examiner which card is being referenced. Appropriate clarification is requested.

7. Claims 2-11 are rejected based on their dependence on claim 1.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4, 6-9, 11-14, 16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maiolani et al. (U.S. Patent No. 6,434,698) in view of Abbondanzio et al. (U.S. Patent No. 6,931,568 hereinafter "Abbondanzio").

10. Referring to method claim 1, and system claim 12, Maiolani teaches a system for arbitrating between an active state and a protected state, comprising:

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a plurality of devices capable of exchanging data (see lines 35-44 of column 2);

a computer monitor for monitoring parameters of other modules in the system representative of operating characteristics (see lines 6-19 of column 3);

a vote out mechanism, responsive to the monitored parameters, for generating a vote signal representative of an assessment of a modules operating condition (see lines 34-44 of column 3); and

a vote tally mechanism, responsive to vote signals received from a computer in the system, and capable of changing an operational state of computer in response thereto (see lines 45-58 of column 3).

Maiolani fails to teach the "card" environment claimed by the applicant, wherein each computer module is implemented as a card, and the plurality of cards are capable of communicating with each other.

Abbondanzio teaches, in an analogous system, computer modules implemented as cards that arbitrate between an active and protected state in the applicant's claimed environment (see lines 42-45 of column 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the

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teachings Maiolani with the above teachings of Abbondanzio in order to reduce the overall physical size of the system.

11. Referring to method claim 2 and system claim 13, Maiolani teaches the vote tally mechanism includes a processor for detecting a majority vote with vote signals received (see lines 45-58 of column 3).

12. Referring to method claim 3 and system claim 14, Maiolani teaches an isolation processor for isolating the module as a function of delivered votes. Abbondanzio teaches the limitation of the module being implemented as a card.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the teachings of Maiolani with the above teachings of Abbondanzio for the same reasons as mentioned above.

13. Referring to method claim 4 and 6, Maiolani teaches a self-diagnostic process for testing local parameters representative of local status (see lines 34-56 of column 3).

14. Referring to claim 7, Maiolani teaches isolating a card includes disabling a hardware interface to an external system

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bus (see lines 6-11 of column 4). If the device is or becomes reset, it is prevented from transferring any data at least temporarily).

15. Referring to method claims 8 and 9, and system claim 19 and 20, Maiolani teaches the self-diagnostic process includes means for altering a state of the module, wherein the self-diagnostic process includes means for driving a module into an isolation state (see lines 51-58 of column 3, setting the interrupt cause a temporary isolation).

16. Referring to claim 11 and 18, Maiolani teaches monitoring a control signal representative of an instruction to adjust between a protection state (inactive state) and an active state (see lines 1-11 of column 4).

17. Referring to claim 16, Maiolani teaches the monitor includes means for detecting an error in a data signal received from a card (see lines 34-50 of column 3).

18. Referring to claim 21, Fletcher teaches isolating a card includes disabling an interface that allows the isolated card to deliver the vote representative of the isolated cards

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determination of the health of another one of the cards (see lines 6-11 of column 4).

19. Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maiolani in view of Abbondanzio as applied to claims 1 and 12 above, and further in view of Fletcher et al. (U.S. Patent No. 3,783,250. hereinafter Fletcher).

20. Referring to claim 10, the combination of Maiolani and Abbondanzio fails to teach the self-diagnostic test includes monitoring a heartbeat timer.

Fletcher teaches the self-diagnostic test includes monitoring a heartbeat timer (see paragraph bridging columns 28 and 29).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Maiolani with the teachings of Fletcher. One of ordinary skill in the art would have been motivated to make such modification in order to provide additional mechanisms of fault detection.

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21. Referring to claim 17, the combination of Maiolani and Abbondanzio fails to teach a lock circuit for requiring a processor to perform a series of predetermined operations to gain access to a memory location (see lines 4-18 of column 28).

Fletcher teaches a lock circuit for requiring a processor to perform a series of predetermined operations to gain access to a memory location (see lines 4-18 of column 28).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Maiolani with the teachings of Fletcher. One of ordinary skill in the art would have been motivated to make such modification in order to ensure the fault has been corrected as suggested by Fletcher (see lines 4-18 of column 28).

22. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maiolani in view of Abbondanzio as applied to claims 1 and 12 above, and further in view of Beilinski et al. (U.S. Patent No. 5,123,089).

23. Referring to claims 5 and 15, Maiolani teaches making a determination of the health of a card includes identifying a parity error (see lines 24-44 of column 3), however the combination of Maiolani and Abbondanzio fails to teach

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determining the health further comprises measuring response time, identifying a check sum error, and identifying a failure to respond to a command.

Beilinski teaches, in an analogous system, determining the health of a device wherein the determination includes measuring response time, identifying a check sum error, and identifying a failure to respond to a command (see lines 46-54 of column 9).

It would have been obvious to one of ordinary skill in the art the time of the applicant's invention to modify the combination of Maiolani and Abbondanzio with the above teachings of Beilinski in order to reduce the chance of propagating different types of errors through the system.

24. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maiolano in view of Abbondanzio as applied to claims 4 above, and further in view of Deng (US Pub No. 20010021955).

25. Referring to claims 22 and 23, the combination of Maiolani and Abbondanzio teach the method of claim 4 as shown above, however the combination fails to teach adding/removing a card to the plurality of cards, and preventing the addition/removal of the card from interfering with the steps of identifying a

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plurality of cards, allowing each card to make a determination, allowing each card to deliver, and having the respective card determine a health status adding a card to the plurality of cards, and preventing the addition of the card from interfering with the steps of identifying a plurality of cards, allowing each card to make a determination, allowing each card to deliver, and having the respective card determine a health status.

Deng teaches, in a system wherein communication cards are added and removed, the above limitation (see paragraph 48). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Maiolani and Abbondanzio with the above teachings of Deng to reduce the downtime of the system as suggested by Deng.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERON J. SORRELL whose telephone number is (571)272-4160. The examiner can normally be reached on Monday-Friday 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the

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organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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